EPA EDIR# E1011
Received: 11/29/2012

CATERPILLAR®

Caterpillar Inc.
P.O. Box 600
Mossville, Illinois 61552

September 25, 2012

Mr. Justin Greuel
Center Director, Diesel Engine Compliance Center
U.S. Environmental Protection Agency
1310 L. Street, N.W. – 6th Floor
Washington, DC 20005

Non-Road Engine Emissions Defect Information Report

Dear Mr. Greuel:

Pursuant to 40 CFR § 1068.501, Caterpillar Inc. has determined that a defect reporting threshold has been reached on certain C13 and C15 Non-Road engines due to an injector failure. The affected engines are from MY2011, engine families BCPXL12.5HPA and BCPXL15.2HPA.

An EDIR is attached, which provides information concerning the issue and the manner in which it will be corrected.

If you have any questions or require additional information, please call.

Sincerely,

Mark A. Rein
Manager, Emissions Conformance and Systems Development
Large Power Systems Division (MOS 11)
Caterpillar Inc.

Telephone: (309) 578-7989
Fax: (309) 578-6939
Rein_Mark_A@cat.com

cc: Ms. A. Hebert – ARB

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EMISSIONS DEFECT INFORMATION REPORT

1) Manufacturer's corporate name and a person to contact regarding this defect:

Caterpillar Inc.
Mark A. Rein
Manager, Emissions Conformance and Systems Development
Telephone: (309) 578-7989
Fax: (309) 578-6939
Rein_Mark_A@cat.com

2) Description of the defect, including a summary of any engineering analyses and associated data, if available:

The spill valve assembly is causing poor injection performance due to the screw that attaches the armature to the valve coming loose. Upon investigation, the first issue was the quantity of adhesive on the suspect armature screw was insufficient as compared to the work instructions. The second issue was inconsistent joint loading resulting in periodic low torque applied to the armature screw.

3) Description of the engine/equipment that have the defect.

Engine Family	Model	Ratings Affected	Production Dates
BCPXL12.5HPA	C13	All	01Mar2011 – 31Dec2011
BCPXL15.2HPA	C15	All	01Feb2011 – 31Dec2011

4i) Number and percentage of engines known or estimated to have the defect and an explanation of the means by which this number was determined:

Currently, the following number of engines is known to be affected by this defect based on the analysis of warranty claims received.

Model Year	Engine Family	Number of Engines	Defect Percentage
2011	BCPXL12.5HPA	34	2.19%
2011	BCPXL15.2HPA	27	3.23%

4ii) Describe any statistical methods used to determine the number of affected engines/equipment:

No statistical methods or tools were used.

The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code.

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5i) An estimate of the defect's impact on emissions, with an explanation of how you calculated this estimate.

Based upon engineering analysis, the emissions impact of this injector failure is expected to be negligible, as the engine would not perform properly causing the operator to seek service.

5ii) Available summary of any emissions data demonstrating the impact of the defect:

No emissions data was collected.

6) A description of your plan for addressing the defect or an explanation of your reasons for not believing the defects must be addressed.

Caterpillar Inc. has already increased training in the area where the spill valve is assembled. An In Process Validation (IPV) station was added to ensure accuracy of assembly and a defined low torque limit was implemented for the assembly operation. The final steps to be implemented in 2012 are a change in the assembly screw on the armature to be more robust and an improved torque process to help ensure proper joint loading.